DxID Post-2010 Chart Review Outcomes

February 28, 2012

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I. What Did We Look For?

- Number of total appropriate members – 57,155
- Number of targeted members overall – 23,293
- Number of GHC members / internal docs – 17,121
- Number of targeted members who saw a doc – 21,221
- Number of total providers with a patient match – 1,040
- % of PCP provider with patient match – 90.38%
- % of patients matched to PCP provider – 99.36

II. How Did It Go?

- Chart Review Cycle – 42 Days
- Number of Charts Reviewed – 15,875
- Number of Physicians Reviewed – 524
- Number of Members with Finds – 4,578
- Top finds validated:
    - Old MI
    - Polyneuropathy
    - Vascular Disease
    - CKD
    - COPD

Based on the late start, it was determined that DxID would only review the records relating to GHC physicians. No network records were reviewed.

III. DxID Review Results for GHC (by HCC)

HCC	Description	Members of Interest In Benchmark	Members of Interest With Suspects	Members Affected
1	HIV/AIDS	66	38	-
2	Septicemia/Shock	483	77	-
5	Opportunistic Infections	112	20	1
7	Metastatic Cancer and Acute Leukemia	663	77	8
8	Lung, Upper Digestive Tract, and Other Severe Cancers	1089	63	1
9	Lymphatic, Head and Neck, Brain, and Other Major Cancers	1973	142	19
10	Breast, Prostate, Colorectal and Other Cancers and Tumors	5818	869	32
15	Diabetes with Renal or Peripheral Circulatory Manifestation	2839	2949	168
16	Diabetes with Neurologic or Other Specified Manifestation	5482	1678	111
17	Diabetes with Acute Complications	5493	9	-
18	Diabetes with Ophthalmologic or Unspecified Manifestation	6061	391	13
19	Diabetes without Complication	11331	1319	51
21	Protein-Calorie Malnutrition	796	565	45
25	End-Stage Liver Disease	124	45	3
26	Cirrhosis of Liver	283	87	8
27	Chronic Hepatitis	471	92	25
31	Intestinal Obstruction/Perforation	608	241	14
32	Pancreatic Disease	527	537	51
33	Inflammatory Bowel Disease	519	255	32
37	Bone/Joint/Muscle Infections/Necrosis	286	189	12
38	Rheumatoid Arthritis and Inflammatory Connective Tissue Disease	2298	932	201
44	Severe Hematological Disorders	321	181	7
45	Disorders of Immunity	272	154	15
51	Drug/Alcohol Psychosis	259	111	12
52	Drug/Alcohol Dependence	773	1667	221
54	Schizophrenia	166	39	3
55	Major Depressive, Bipolar, and Paranoid Disorders	5574	1574	302
67	Quadriplegia, Other Extensive Paralysis	116	53	3
68	Paraplegia	207	49	8
69	Spinal Cord Disorders/Injuries	405	412	13
70	Muscular Dystrophy	23	16	2
71	Polyneuropathy	6633	2231	448
72	Multiple Sclerosis	335	72	5
73	Parkinson's and Huntington's Diseases	738	162	17
74	Seizure Disorders and Convulsions	939	482	39
75	Coma, Brain Compression/Anoxic Damage	79	144	3
77	Respirator Dependence/Tracheostomy Status	53	63	4
78	Respiratory Arrest	63	8	-
79	Cardio-Respiratory Failure and Shock	2123	1520	174
80	Congestive Heart Failure	5637	3290	257
81	Acute Myocardial Infarction	550	1093	7
82	Unstable Angina and Other Acute Ischemic Heart Disease	1111	910	3
83	Angina Pectoris/Old Myocardial Infarction	5667	2600	733
92	Specified Heart Arrhythmias	8491	699	152
95	Cerebral Hemorrhage	194	330	1
96	Ischemic or Unspecified Stroke	1071	107	1
100	Hemiplegia/Hemiparesis	1017	1545	71
101	Cerebral Palsy and Other Paralytic Syndromes	1161	286	19
104	Vascular Disease with Complications	815	965	11
105	Vascular Disease	5448	3150	419
107	Cystic Fibrosis	2	23	-
108	Chronic Obstructive Pulmonary Disease	5611	2155	248
111	Aspiration and Specified Bacterial Pneumonias	364	78	6
112	Pneumococcal Pneumonia, Emphysema, Lung Abscess	554	37	-
119	Proliferative Diabetic Retinopathy and Vitreous Hemorrhage	390	151	9
130	Dialysis Status	217	231	10
131	Renal Failure	9260	2149	384
132	Nephritis	9642	469	59
148	Decubitus Ulcer of Skin	566	198	19
149	Chronic Ulcer of Skin, Except Decubitus	2352	267	9
150	Extensive Third-Degree Burns	1	0	-
154	Severe Head Injury	3	3	-
155	Major Head Injury	227	92	-
157	Vertebral Fractures without Spinal Cord Injury	1239	79	9
158	Hip Fracture/Dislocation	729	102	-
161	Traumatic Amputation	51	129	-
164	Major Complications of Medical Care and Trauma	1494	144	8
174	Major Organ Transplant Status	78	23	1
176	Artificial Openings for Feeding or Elimination	500	250	34
177	Amputation Status, Lower Limb / Amputation Complications	295	103	37
1	DM_CHF			7
2	DM_CVD			2
3	CHF_COPD			9
5	RF_CHF			7
6	RF_CHF_DM			4

IV. Can I Code It? —It's There or It Isn't There

A good clinician can "tell" whether or not a condition still exists. There are many chronic conditions that never go away if they ever existed based on definition. That does not mean that a straight coder can, or that every clinician can always "tell". From a clinical perspective conditions are chronic – but chronic is defined condition to condition in some cases. Acute – those resolve, acute – but only exist only a state of an underlying chronic condition etc. sub acute – it goes on and on.

Whether the patient has a condition is only a piece of whether you can code it from an Official Coding Guideline - ICD9 perspective. Physical location of the patient has an impact, documentation available to support the diagnosis has an impact and then CMS's interpretation has an impact for the purposes of HCC risk adjustment. CMS's Guiding Principle from the Participant Guide:

> "The risk adjustment diagnosis must be based on clinical medical record documentation from a face-to-face encounter, coded according to the ICD-9-CM Guidelines for Coding and Reporting; assigned based on dates of service within the data collection period, and submitted to the MA organization from an appropriate risk adjustment provider type and an appropriate risk adjustment physician data source."

The ICD 9 CM Official Coding Guidelines state that when the information provided is not clear; refer to AHIMA (American Health Information Management Association) and to the AHA Coding Clinic (American Hospital Association) for clarity and support. (ICD 9 is frequently not clear).

CMS also applies other guidance that conflicts with this, but further states, that ICD-9 CM guidelines trump and AHIMA and AHA Coding Clinic trump those.

There is confusion because CMS has said, for RADV purposes, send the one best medical record to support the HCC. This has sometimes been interpreted as "send the one best encounter note." On February 24th, 2012, CMS clarified that rule to state that Plans could send multiple records to support each HCC. (Note, you support the HCC not the ICD9) Physicians treat off the collective medical record, not the prior note, so it makes sense to provide the encounter note AND the information available to the physician at the time of the encounter note – which would include medical history, labs, x-ray reports, hospital discharge notes etc. and some "in lieu" of documentation.

It is important from a CMS perspective that the disease state is documented in order to have it coded, frankly though, it is arguably based on what they have said, it is more important that it is documented in the medical record than whether the patient actually has it based on the rules they have set.

There are many issues – ex. What in fact is a medical record and who decides – Is it what is covered by HIPAA? Is it what AHIMA says? Is it a legal medical record component – these are just some of the gray areas.

From an HCC submission component, a disease has to exist clinically, be documented in the medical record, be available to the physician at the time of a face to face visit, be code-able from an ICD 9 coding guideline perspective, based either on hospital inpatient rules or outpatient rules. Even then, there are gray areas.

When you use problem lists, make sure that they are current and updated with each encounter, to stay on the safe side, make sure that a clinically astute coder collects just the chronic conditions – make a policy requiring physicians signing and dating everything – and further, make it clear policy that if they have information available to them at the time of an encounter, they are accepting it as true, or a written rebuttal is required.

From CMS Guide to Evaluation and Treatment

DG: The review of lab, radiology and/or other diagnostic tests should be documented. An entry in a progress note such as "WBC elevated" or "chest xray unremarkable" is acceptable. Alternatively, the review may be documented by initialing and dating the report containing the test results.

From The AHA Coding Clinic

Question:
We need to get clarification on the coding of chronic conditions. One of the quality improvement organizations (QIOs) will not allow the inclusion of chronic obstructive pulmonary disease (COPD) as a secondary diagnosis when it is only mentioned as a history of COPD and no active treatment is documented. Am I correct in stating the presence of a documented history of COPD in the physician history and physical on an inpatient record is enough to code COPD as a secondary diagnosis, since this is a chronic condition that always affects the patient care and treatment to some extent?

Answer:
As stated in Coding Clinic, July-August 1985, page 10, the criteria for selection of the conditions to be reported as "other diagnoses" include the severity of the condition, use or consideration of alternative measures in the treatment of the principal diagnosis due to a coexisting condition, increased nursing care required in the care of patients due to the disabling features of the coexisting condition, use of diagnostic or therapeutic services for the particular coexisting condition, the need for close monitoring of medications, or modifications of nursing care plans.

If there is documentation in the medical record to indicate that the patient has COPD, it should be coded. Even if this condition is listed only in the history section with no contradictory information, the condition should be coded. Chronic conditions such as, but not limited to, hypertension, Parkinson disease, COPD, and diabetes mellitus are chronic systemic diseases that ordinarily should be coded even in the absence of documented intervention or further evaluation. Some chronic conditions affect the patient for the rest of his or her life and almost always require some form of continuous clinical evaluation or monitoring during hospitalization, and therefore should be coded. This advice applies to inpatient coding.

For outpatient encounters/visits, chronic conditions that require or affect patient care treatment or management should be coded.

Medicare Claims Processing Manual Chapter 23
(Rev. 1, 10-01-03)

Incidental findings should never be listed as primary diagnoses. If reported, incidental findings may be reported as secondary diagnoses by the physician interpreting the diagnostic test.

EXAMPLE 1: A patient is referred to a radiologist for an abdominal ultrasound due to jaundice. After review of the ultrasound, the interpreting physician discovers that the patient has an aortic aneurysm. The interpreting physician reports jaundice as the primary diagnosis and may report the aortic aneurysm as a secondary diagnosis because it is an incidental finding.

EXAMPLE 2: A patient is referred to a radiologist for a chest x-ray because of wheezing. The x-ray is normal except for scoliosis and degenerative joint disease of the thoracic spine. The interpreting physician reports wheezing as the primary diagnosis since it was the reason for the patient's visit and may report the other findings (scoliosis and degenerative joint disease of the thoracic spine) as additional diagnoses.

EXAMPLE 3: A patient is referred to a radiologist for a magnetic resonance imaging (MRI) of the lumbar spine with a diagnosis of L-4 radiculopathy. The MRI reveals degenerative joint disease at L1 and L2. The radiologist reports radiculopathy as the primary diagnosis and may report degenerative joint disease of the spine as an additional diagnosis.

10.1.4 - Unrelated Coexisting Conditions/Diagnoses
(Rev. 1, 10-01-03)

Unrelated and coexisting conditions/diagnoses may be reported as additional diagnoses by the physician interpreting the diagnostic test.

EXAMPLE: A patient is referred to a radiologist for a chest x-ray because of a cough. The result of the chest x-ray indicates the patient has pneumonia. During the performance of the diagnostic test, it was determined that the patient has hypertension and diabetes mellitus. The interpreting physician reports a primary diagnosis of pneumonia. The interpreting physician may report the hypertension and diabetes mellitus as secondary diagnoses.

V. The Dreaded RADV

It's important to set the playing field here.

95% of the diagnoses GHC submits are from claim data, not from audit. The diagnoses submitted from claim data are actually where the risk is form a RADV standpoint - just due to volume. Further, they are likely to have far less scrutiny applied to them than a DxID or an internal coding team member would apply to those diagnoses pulled from the record based on audit.

CMS contracts with two independent review contractors to conduct medical record reviews. The initial validation contractor (IVC) conducts and facilitates the process and conducts the initial review of medical records. The second validation contractor (SVC) receives the discrepant medical records from the IVC, confirms risk adjustment discrepancies that are identified by the IVC, and implements the appeals process. Both IVC and SVC use certified coders to abstract diagnosis codes and validation provider type, physician data source, and date(s) of service.

It is important to understand some of the nuances of the RADV audit:

- The RADV is by member — not by diagnosis or by HCC — and they are selected randomly using a published formula, so there is no reason to assume that statistically ANY of the HCC's for any of the members selected for RADV will relate to ICD 9s submitted from medical record audits
- It is likely that any member with HCCs selected for RADV audit — where the HCC is based on an ICD 9 collected from medical record audit — will be easily and rapidly supported than those that are extracted from claim data. Coders code better than doctors code; doctors treat patients better than coders can.
- The number of members reviewed relates to company size. The largest number ever requested would be 200.
- The Plan is required to support the HCCs being paid for the members selected – not the ICD 9 submitted. Each HCC has multiple ICD 9s.
- The Plan has to substantiate, from a clinical and coding standpoint, that the patient has the disease and that the medical record supports the fact that they do. Frankly, you could probably win the argument either from a coding standpoint, a clinical standpoint or a CMS interpretation standpoint.
- There are a variety of reasons that CMS may determine that the medical record does not support the code. This can vary from the issue being a discrepancy in the 3rd 4th or 5th digit of the ICD 9 code to the fact that there is no diagnosis to support the HCC. Alternatively, they may determine that you coded too low.

On February 24th 2012, CMS confirmed new guidance on the RADV. Here it is.

Notice of Final Payment Error Calculation Methodology for Part C Medicare Advantage Risk Adjustment Data Validation Contract-Level Audits

Introduction

On December 21, 2010 the Centers for Medicare and Medicaid Services (CMS) posted on its website the "Medicare Advantage Risk Adjustment Data Validation (RADV) Notice of Payment

Error Calculation Methodology for Part C Organizations Selected for RADV Audit – Request for Comment". CMS invited public comment on the proposed methodology, with such comments to be submitted in writing by Friday, January 21, 2011.

CMS carefully reviewed the more than 500 comments received on the draft methodology. This Notice responds to the analytic concerns raised relating to extrapolation and payment recovery and presents the final methodology for the RADV payment error calculation.

Following the background section, this Notice provides a general walkthrough of the RADV payment error calculation methodology in two sections: (A) sampling; and (B) payment error calculation.

This methodology will be applied to the next round of RADV contract-level audits, which will be conducted on payment year 2011. Payment year 2011 is the first year for which payment recovery based on extrapolated estimates will be conducted for Medicare Advantage (MA). Note that sampling for RADV audits will occur after the close of final reconciliation for the payment year being audited.

CMS' RADV audit initiative is the Agency's primary strategy to address the national payment error rate for the MA program, which is currently estimated to be 11 percent for FY 2011. In addition to recovery of overpayments through RADV audits, CMS also expects that these contract-level audits will have a sentinel effect on the quality of risk adjustment data submitted for payment by MA organizations.

Background

Section 1853(a)(3) of the Social Security Act requires that CMS risk adjust payments to Medicare Advantage (MA) organizations. In general, the current risk adjustment methodology relies on enrollee diagnoses, as specified by the International Classification of Disease, Ninth Revision Clinical Modification guidelines (ICD-9-CM), to prospectively adjust capitation payments for a given enrollee based on the health status of the enrollee. Diagnosis codes submitted by MA organizations are used to determine beneficiary risk scores, which in turn determine the risk-adjusted reimbursement.

RADV audits determine whether the diagnosis codes submitted by MA organizations can be validated by supporting medical record documentation. This medical record documentation must meet certain criteria and standards specified in RADV materials that CMS provides to audited contracts. Diagnoses that cannot be validated contribute to a payment error rate. This document describes the sampling methodology that CMS will use for RADV audits and the methodology for calculating the payment error for each audited Medicare Advantage contract.

A. Sampling

To conduct these audits, CMS selects a set of MA contracts for each RADV audit cycle. Enrollees are sampled from each selected MA contract for the purpose of estimating payment error related to risk adjustment.

Sampling Frame

First, CMS identifies all beneficiaries under each MA contract who are "RADV-eligible" because they meet the following criteria:

1. Enrolled in an MA contract (H-number, E-number, or R-number) in January of the payment year— based on CMS' monthly member enrollment files;
2. Continuously enrolled in the same MA contract (as identified in step (1) above) from January of the data collection year through January of the payment year;
3. Non-End Stage Renal Disease (non-ESRD) status from January of the data collection year through January of the payment year;
4. Non-hospice status from January of the data collection year through January of the payment year;
5. Enrolled in Medicare Part B coverage for all 12 months during the data collection year (i.e., defined as full risk enrollees for risk adjusted payment); and
6. Had at least one risk adjustment diagnosis (ICD-9-CM code) submitted during the data collection year that led to at least one CMS-Hierarchical Condition Category (HCC) assignment for the payment year.

Sample Size and Strata

Next, CMS selects a sample of beneficiaries from each contract's cohort of RADV-eligible enrollees. Enrollee-based stratification will be used in the process of sampling enrollees. In order to derive the strata, the RADV-eligible enrollees in each contract will be ranked from lowest to highest based on their community risk score. The enrollees will then be divided into three equal groups based on the total number of eligible enrollees, where the first group will include the third of enrollees with the highest risk scores and the third group will include the third of enrollees with the lowest risk scores. The remaining enrollees will be in the middle stratum.

CMS will select up to 201 enrollees for medical record review from each contract selected for a contract- level audit. For smaller contracts, i.e., those with fewer than 1,000 RADV-eligible enrollees, CMS will individually adjust their sample sizes by using the finite population correction factor. The sample sizes for these smaller contracts will be 201 or fewer enrollees.

To achieve a sample size of 201 enrollees per contract, sixty-seven (67) enrollees will be randomly sampled from each group or stratum. The corresponding stratum-based enrollee weights will be computed as the number of RADV-eligible enrollees in the population grouping (or stratum) divided by the number of enrollees selected from that grouping for the sample, i.e., N_h/n_h, where h represents the corresponding stratum.

For example, if a contract has 3,000 RADV-eligible enrollees, the enrollees would be ranked by risk score, then divided into three equal groups of 1,000 enrollees each (to represent high, medium, and low strata). An equal number of enrollees will be randomly selected from each group. The weight for each sampled enrollee will equal 14.925 (i.e., 1,000/67).

For small contracts with fewer than 1,000 RADV-eligible enrollees, the same enrollee-based stratification process will be applied; however, a proportionally smaller number of enrollees will be randomly sampled from each group or stratum.

The enrollee sampling weights will be used as multipliers to scale-up (or extrapolate) the sample

payment error findings to the population it represents.

Once enrollees have been selected, the MA contract will be required to submit medical records to support all CMS-HCCs represented in the sampled beneficiaries' risk scores for the payment year.

Effective with the CY 2011 RADV audit, CMS will allow audited MA contracts to submit multiple medical records for each CMS-HCC being validated. All diagnoses will be abstracted from the first medical record that validates the CMS-HCC under review. The one best medical record policy will continue to apply to the RADV audit dispute and appeal processes outlined in 42 CFR §422.311. CMS will provide more detailed information in the RADV audit procedures that will be distributed to audited MA contracts.

B. Payment Error Calculation

Enrollee-level Payment Error Calculation

CMS will calculate each contract's payment error based on the validation results. For each sampled enrollee, the RADV-corrected risk score and corrected payment will be calculated based on the CMS- HCCs that are supported by RADV medical record review findings for the enrollee. Enrollee-level payment errors will be defined as the difference between the original payment and the RADV-corrected payment (per member per month). The payment error for each enrollee will be either positive (representing a net overpayment), or negative (representing a net underpayment). An annual payment error amount will be calculated for each sampled enrollee based on the number of months the person was enrolled in the selected MA contract (and was not in ESRD or hospice status) during the payment year.

Payment Error Extrapolation Calculation

To derive the payment error estimate for each MA contract, the annual payment error for each sampled enrollee will be multiplied by the enrollee's sampling weight (computed for each stratum [h] during the sampling phase as Nh/nh, where N represents the number of enrollees in the RADV-eligible population and n is the number of enrollees sampled). The weighted enrollee annual payment error will be summed across all enrollees in the sample to determine an estimated payment error for the MA contract (the "point estimate"). A 99 percent confidence interval (CI) will then be calculated for the estimated payment error for each audited MA contract.

The following formulas illustrate computation of a 99 percent CI around the payment error estimate for one contract, assuming a sample size of 201, with 67 enrollees selected from each of three strata groupings.

The lower bound of the 99 percent CI is computed as the estimated payment error for the contract (PE) minus (2.575 multiplied by the standard error), or (PE – (2.575 * SE)). The standard error (SE) can be calculated as follows:

1. Derive the variance, v_h, (standard deviation squared) of the unweighted enrollee payment errors across the sample enrollees within each of the three strata (h).

2. Calculate the variance of the estimated total ($V_{\hat{T}}$) payment error, where N represents the number of enrollees in the RADV-eligible population of the hth (1st, 2nd, 3rd) stratum:

$$V_{\hat{T}} = \sum_{h=1}^{3} \frac{N_h^2}{67} v_h$$

3. The standard error is $SE_{\hat{T}} = \sqrt{V_{\hat{T}}}$

Payment Recovery Amount and the Fee for Service Adjuster

If the CI for the point estimate includes zero or is below zero, the contract will have the payment recovery amount constrained to zero.

If the CI for the point estimate is above zero, the payment recovery amount for the contract will be determined as follows. First, a preliminary payment recovery amount will be set at the lower bound of the 99 percent CI for the contract's point estimate. Second, to determine the final payment recovery amount, CMS will apply a Fee-for-Service Adjuster (FFS Adjuster) amount as an offset to the preliminary recovery amount. If the FFS Adjuster amount is greater than the preliminary recovery amount, the final recovery amount is equal to zero.

The FFS adjuster accounts for the fact that the documentation standard used in RADV audits to determine a contract's payment error (medical records) is different from the documentation standard used to develop the Part C risk-adjustment model (FFS claims). The actual amount of the adjuster will be calculated by CMS based on a RADV-like review of records submitted to support FFS claims data.

Guidance from CMS Training Slides on Appeals Process

Hospital outpatient and physician office medical records should include, but are not limited to, the following:

- Face sheet
- History and physical exam
- Physician orders
- Progress notes
- Diagnostic reports (to support documentation)
- Consultation reports

Submit all relevant medical record components needed to validate the date of service, beneficiary, the HCC, and ICD-9 code selected. When you submit medical record documentation to support only the physician face-to-face that occurred during an inpatient stay, the same medical components are needed; however, the medical record documentation will be reviewed in accordance with Diagnostic Coding and Reporting Guidelines for Outpatient Services.

An appeals process is implemented if an MA organization disputes a payment adjustment. The appeals process is conducted by the SVC. An expert coding panel reviews every appeal. The panel is typically comprised of a senior medical reviewer, a senior coder, and a physician. The

physician assesses whether any clinical factors may change the outcome of the appeals determination.

Consistent with Medicare fee-for-service, an MA organization has one opportunity to challenge a payment adjustment. Once a payment adjustment has been made and appears on the Monthly Membership Report (MMR), the MA organization has 60 days to file an appeal.

When submitting an appeal, an MA organization may offer a different interpretation of the ICD-9 code assignment based on ICD-9 Coding Clinic Guidelines. MA organizations may also provide additional medical record documentation to support their appeal. Thus, each appeal must include, at a minimum:

- A clearly documented reason for disagreement with the medical record review finding; and/or Additional medical record documentation to support the reason for appeal.

VI. Some Specific Coding Guidance

When should an old compression fracture be documented/coded as 733.13 chronic compression fracture vs V54.1*?

The ICD-9-CM Official Guidelines for Coding and Reporting provide guidance on this issue:

> Pathologic fractures are reported using subcategory 733.1, when the fracture is newly diagnosed. Subcategory 733.1 may be used while the patient is receiving active treatment for the fracture. Examples of active treatment are: surgical treatment, emergency department encounter, evaluation and treatment by a new physician.
>
> Fractures are coded using the aftercare codes (subcategories V54.0, V54.2, V54.8 or V54.9) for encounters after the patient has completed active treatment of the fracture and is receiving routine care for the fracture during the healing or recovery phase. Examples of fracture aftercare are: cast change or removal, removal of external or internal fixation device, medication adjustment, and follow up visits following fracture treatment.
>
> Care for complications of surgical treatment for fracture repairs during the healing or recovery phase should be coded with the appropriate complication codes.
>
> Care of complications of fractures, such as malunion and nonunion, should be reported with the appropriate codes.

The American Hospital Association Coding Clinic, First Quarter 2007, Pages 3-8, contains several valuable examples for establishing an internal policy on this matter.

Do we want to code from a linked Dx in the Snapshot? (Assumes the Dx is not documented in the encounter note.)

> The Snapshot contains very valuable, likely valid clinical information. It appears to be a result of review of the documentation rather than review of the patient during an encounter. It would be a good idea to create a policy requiring physicians to approve or rebut the content at the next encounter, either through the system or via assumption.

**Do we want to submit HCC's for level 1 & 2 CKD? If yes, based on what documentation?**

Chronic kidney disease (CKD) is a part of the risk adjustment model because it represents clinical risk. When a provider documents CKD, the diagnosis should be considered valid for risk adjustment. The cost of CKD and its associated diseases is a significant burden to any health plan.

The National Kidney Foundation states that:

> Glomerular filtration rate is the best test to measure your level of kidney function and determine your stage of kidney disease. Your doctor can calculate it from the results of your blood creatinine test, your age, race, gender and other factors. The earlier kidney disease is detected, the better the chance of slowing or stopping its progression.

The National Kidney Foundation also provides clinical guidelines for diagnosing chronic kidney disease using the glomerular filtration rate:
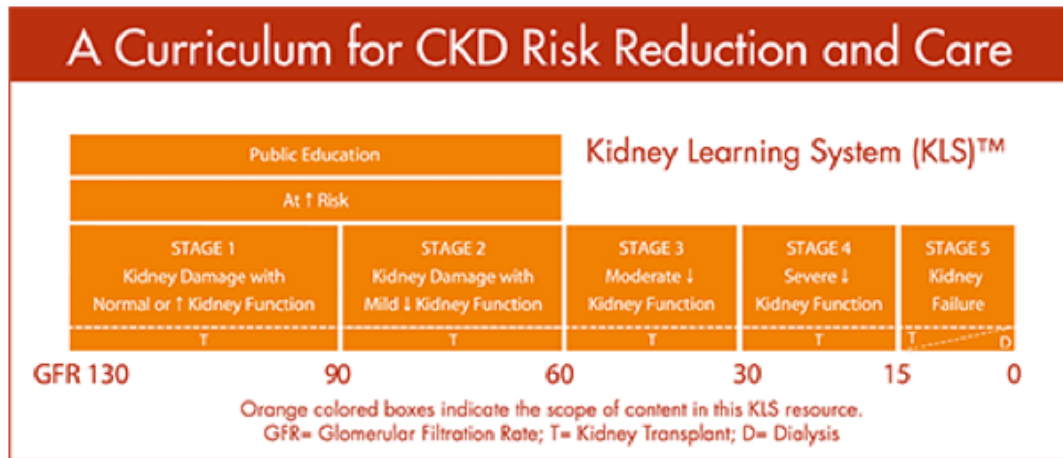
Clinical guidelines for CKD, stages 1 and 2, require kidney damage as well as decreased kidney function. We recommend assigning CKD stages 1 or 2 when the physician documents the diagnosis in a signed and dated note. Using GFR values to assign CKD stages 1 and 2 may pose a risk because the provider may not have properly documented the kidney damage.

Do we want to code old MI when a qualifying condition (CAD, stent insertion) is listed on the active problem list which is embedded in an encounter note, and the encounter note has a link to the EKG tab, which leads to an EKG containing a confirmed old MI?

The American Hospital Association (AHA) publishes the official coding guidelines and coding advice for ICD-9-CM. The AHA Coding Clinic for ICD-9-CM, Second Quarter 2003, Page 10, provides clear guidance on the coding of old myocardial infarctions:

> Question: When is it appropriate to assign code 412, Old myocardial infarction, versus code 414.8, Other specified forms of chronic ischemic heart disease, as a secondary diagnosis to show any old myocardial infarction (MI)?

> Answer: Code 412, Old myocardial infarction, is a history code and should be reported to identify a "healed old MI" whether the patient is currently experiencing problems of not. An old myocardial infarction is coded because it is significant and affects the management of the patient. The note under code 412 mentioning, "currently presenting no symptoms" refers to symptoms related to the previous old myocardial infarction, not cardiac symptoms in general.

Section IV, Diagnostic Coding and Reporting Guidelines for Outpatient Services, of the ICD-9-CM Official Guidelines for Coding and Reporting states:

> For outpatient encounters for diagnostic tests that have been interpreted by a physician, and the final report is available at the time of coding, code any confirmed or definitive diagnosis(es) documented in the interpretation. Do not code related signs and symptoms as additional diagnoses.

Do we want to code hypoxemia (799.02) when the dx is embedded in the problem list (not annotated) or the pt. has an arterial O2 saturation less than or equal to 88% documented in a face to face encounters note or the patient is prescribed continuous oxygen and has a qualifying condition (COPD, etc.), both of which are documented on a face-to-face encounter note in the base year.

Please see the above discussion for hypoxemia listed on the problem list.

The American Association for Respiratory Care Clinical (AARC) Practice Guideline provides laboratory results suggesting hypoxemia:

> Laboratory indications: Documented hypoxemia in adults, children, and infants older than 28 days as evidenced by [1] PaO2 $\leq$ 55 mm Hg or SaO2 $\leq$ 88% in subjects breathing room air or [2] PaO2 of 56-59 mm Hg or SaO2 or SpO2 $\leq$ 89% in association with specific clinical con- ditions (eg, cor pulmonale, congestive heart failure, or erythrocythemia with hematocrit > 56).

The Merck Manual for Health Care Professionals define hypoxemia as, "a decrease in Po2 in arterial blood; hypoxia is a decrease in the Po2 in the tissue. ABGs accurately assess the presence of hypoxemia, which is generally defined as a Pao2 low enough to reduce the Sao2 below 90% (ie, Pao2 < 60 mm Hg)."

Each Medicare Advantage organization needs to review its internal policy for defining hypoxemia. With an established policy, laboratory results indicating hypoxemia that are documented in a dated medical record signed by a provider relevant for risk adjustment should be considered for the purposes of risk adjustment.

It is not uncommon for Medicare Advantage organizations to structure certain benefits using Fee-For-Service guidelines. The Centers for Medicare & Medicaid Services (CMS) have provided documentation and clinical standards for prescribing home oxygen.

Chapter 1, Part 4 (Sections 240.2) of The Medicare National Coverage Determinations Manual (NCD) specifies that:

> Medicare coverage of home oxygen and oxygen equipment under the durable medical equipment (DME) benefit (see §1861(s)(6)of the Act) is considered reasonable and necessary only for patients with significant hypoxemia who meet the medical documentation, laboratory evidence, and health conditions

If a Medicare Advantage organization uses clinical guidelines that require clinical evidence of hypoxemia to provide home oxygen, then the use of continuous oxygen should be considered for the purposes of risk adjustment.

Do we want to submit dx's based solely on embedded problem lists (PL embedded in visit note, but the condition is not annotated as to status.)

It is important to be cognizant of the clinical data on a problem list for the purposes of risk adjustment. It is not unusual for chronic conditions to be noted in the problem list or in past medical history.

The 2008 Risk Adjustment Data Technical Assistance For Medicare Advantage Organizations Participant Guide provides clear guidance on problem lists:

> For CMS' risk adjustment data validation purposes, an acceptable problem list must be comprehensive and show evaluation and treatment for each condition that relates to an ICD-9 code on the date of service, and it must be signed and dated by the physician or physician extender.

Chronic conditions listed on the problem list should be considered for the purposes of risk adjustment. Monitoring a diagnosis to prevent further progression of the disease is considered monitoring, evaluating and sometimes treatment depending on the nature of the disease.

If a systemic condition is listed under past medical history, but the patient is receiving continued treatment, can that be coded?

The Centers for Medicare & Medicaid Services recognize the ambiguous use of "history of" conditions in medical records.

The 2008 Risk Adjustment Data Technical Assistance For Medicare Advantage Organizations Participant Guide states:

> Use of "history of." In ICD-9-CM, "history of" means the patient no longer has the condition and the diagnosis often indexes to a V code not in the HCC models. A physician can make errors in one of two ways with respect to these codes. One error is to code a past condition as active. The opposite error is to code as "history of" a condition when that condition is still active. Both of these errors can impact risk adjustment if not properly coded.

A failure to recognize active conditions in the "history of" section of a medical record can negatively affect reimbursement. It is particular important to recognize chronic conditions listed in the "history of" section. Section IV, Diagnostic Coding and Reporting Guidelines for Outpatient Services, of the ICD-9-CM Official Guidelines for Coding and Reporting state, "Chronic diseases treated on an ongoing basis may be coded and reported as many times as the patient receives treatment and care for the condition(s)."

The American Hospital Association provides further guidance on coding diagnoses when they are listed in the "history" section of the medical record.

> Question: A patient is admitted for left total hip replacement because of advanced degenerative joint disease. The patient has a history of congestive heart failure and is currently taking Digoxin and Lasix for that condition. The patient is continued on these medications during her hospitalization and shows no sign of cardiac decompensation during the hospital coarse. Should congestive heart failure be coded as a secondary diagnosis and if so, what code should be assigned?
>
> Answer: Yes, congestive heart failure (428.0) is a condition under treatment and should be coded as a secondary condition.

Section IV, Diagnostic Coding and Reporting Guidelines for Outpatient Services, of the ICD-9-CM Official Guidelines for Coding and Reporting states:

> For outpatient encounters for diagnostic tests that have been interpreted by a physician, and the final report is available at the time of coding, code any confirmed or definitive diagnosis(es) documented in the interpretation. Do not code related signs and symptoms as additional diagnoses.

From CMS's Evaluation and Services Documentation Guide p.4

DG: The review of lab, radiology and/or other diagnostic tests should be documented. An entry in a progress note such as "WBC elevated" or "chest xray unremarkable" is acceptable. Alternatively, the review may be documented by initialing and dating the report containing the test results.

Depression – it's costing you

"People diagnosed with depression had health care costs that were nearly twice the amount as for those who were not diagnosed with depression, and these higher costs were prevalent in every category of care."

"The cost of treating people with coronary heart disease (CHD) and depression was 54 percent greater than treating people with CHD alone depression among women was associated with 15 to 53 percent increases in 5-year cardiovascular costs six community surveys following the course of coronary artery disease found that patients with depression in the period immediately following a heart attack were 3.5 times more likely to die than non-depressed patients. Total health care expenditures for people with depression and diabetes were more than four times higher than for people with diabetes alone. People with depression had higher median per-patient, annual, non-mental health costs than patients without depression across 11 chronic diseases."

"Major depression, known as major depressive disorder in the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision), is a mood disorder distinguished by the occurrence of one or more major depressive episodes. A major depressive episode is diagnosed when an individual experiences persistent feelings of sadness or anxiety, with loss of interest or pleasure in usual activities (anhedonia). In addition, five or more of the following symptoms must be present for at least two consecutive weeks: changes in appetite that result in weight losses or gains unrelated to dieting; insomnia or oversleeping; loss of energy or increased fatigue; restlessness or irritability; feelings of worthlessness or inappropriate guilt; difficulty thinking, concentrating, or making decisions; and thoughts of death or suicide, or attempts at suicide. A cause or trigger for major depression may not be identified in all individuals. However, genetic predisposition and/or disturbances in levels of the neurotransmitters serotonin, dopamine, and norepinephrine are believed to be the underlying metabolic abnormalities in most cases."

Types of Depression

Major depression is defined as depressed mood most of the day or loss of interest or pleasure over a two-week period accompanied by at least four of the following symptoms: significant weight loss or gain, insomnia or sleeping too much nearly every day, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or guilt, inability to think or concentrate, or recurrent thoughts of death. In elderly adults, cognitive symptoms (e.g., disorientation, memory loss, and distractibility) may be particularly prominent.

Minor depression is one or more periods of depressive symptoms that have lasted for two weeks or longer, but with fewer symptoms and less impairment than major depression. An episode involves either a sad or depressed mood or loss of interest or pleasure in nearly all activities.

Dysthymic disorder, or dysthymia, is a long-term (two years or longer) depressed mood for most of the day, for more days than not, accompanied by two or more of the following: poor appetite or overeating, insomnia or sleeping too much, low energy or fatigue, low self-esteem, poor concentration or difficulty making decisions, and feelings of hopelessness. The symptoms are less severe than depression.

Source: American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed., Text Revision, 2000.

VII. Some Excerpts from Official Coding Guidelines

ICD-9-CM Official Guidelines for Coding and Reporting
Effective October 1, 2010

The Centers for Medicare and Medicaid Services (CMS) and the National Center for Health Statistics (NCHS), two departments within the U.S. Federal Government's Department of Health and Human Services (DHHS) provide the following guidelines for coding and reporting using the International Classification of Diseases, 9thRevision, Clinical Modification (ICD-9-CM).

These guidelines should be used as a companion document to the official version of the ICD-9-CM as published on CD-ROM by the U.S. Government Printing Office (GPO). These guidelines have been approved by the four organizations that make up the Cooperating Parties for the ICD-9-CM: the American Hospital Association (AHA), the American Health Information Management Association (AHIMA), CMS, and NCHS. These guidelines are included on the official government version of the ICD-9-CM, and also appear in "Coding Clinic for ICD-9-CM" published by the AHA.

These guidelines are a set of rules that have been developed to accompany and complement the official conventions and instructions provided within the ICD-9-CM itself. The instructions and conventions of the classification take precedence over guidelines. These guidelines are based on the coding and sequencing instructions in Volumes I, II and III of ICD-9-CM, but provide additional instruction. Adherence to these guidelines when assigning ICD-9-CM diagnosis and procedure codes is required under the Health Insurance Portability and Accountability Act (HIPAA). The diagnosis codes (Volumes 1-2) have been adopted under HIPAA for all healthcare settings. Volume 3 procedure codes have been adopted for inpatient procedures reported by hospitals. A joint effort between the healthcare provider and the coder is essential to achieve complete and accurate documentation, code assignment, and reporting of diagnoses and procedures. These guidelines have been developed to assist both the healthcare provider and the coder in identifying those diagnoses and procedures that are to be reported. The importance of consistent, complete documentation in the medical record cannot be overemphasized. Without such documentation accurate coding cannot be achieved. The entire record should be reviewed to determine the specific reason for the encounter and the conditions treated.

The term encounter is used for all settings, including hospital admissions. In the context of these guidelines, the term provider is used throughout the guidelines to mean physician or any qualified health care practitioner who is legally accountable for establishing the patient's diagnosis. Only this set of guidelines, approved by the Cooperating Parties, is official.

Section III. Reporting Additional Diagnoses
GENERAL RULES FOR OTHER (ADDITIONAL) DIAGNOSES (hospital)

For reporting purposes the definition for "other diagnoses" is interpreted as additional conditions that affect patient care in terms of requiring:

- clinical evaluation; or
- therapeutic treatment; or
- diagnostic procedures; or

- extended length of hospital stay; or
- increased nursing care and/or monitoring.

The UHDDS item #11-b defines Other Diagnoses as "all conditions that coexist at the time of admission, that develop subsequently, or that affect the treatment received and/or the length of stay. Diagnoses that relate to an earlier episode, which have no bearing on the current hospital stay are to be excluded." UHDDS definitions apply to inpatients in acute care, short-term, long term care and psychiatric hospital setting. The UHDDS definitions are used by acute care short-term hospitals to report inpatient data elements in a standardized manner. These data elements and their definitions can be found in the July 31, 1985, Federal Register (Vol. 50, No, 147), pp. 31038-40.

Since that time the application of the UHDDS definitions has been expanded to include all non-outpatient settings (acute care, short term, long term care and psychiatric hospitals; home health agencies; rehab facilities; nursing homes, etc).

B. Abnormal findings

Abnormal findings (laboratory, x-ray, pathologic, and other diagnostic results) are not coded and reported unless the provider indicates their clinical significance. If the findings are outside the normal range and the attending provider has ordered other tests to evaluate the condition or prescribed treatment, it is appropriate to ask the provider whether the abnormal finding should be added.

Please note: This differs from the coding practices in the outpatient setting for coding encounters for diagnostic tests that have been interpreted by a provider.

C. Uncertain Diagnosis

If the diagnosis documented at the time of discharge is qualified as "probable," "suspected," "likely," "questionable," "possible," or "still to be ruled out" or other similar terms indicating uncertainty, code the condition as if it existed or was established. The bases for these guidelines are the diagnostic workup, arrangements for further workup or observation, and initial therapeutic approach that correspond most closely with the established diagnosis. Note: This guideline is applicable only to inpatient admissions to short-term, acute, long-term care and psychiatric hospitals

Section IV.Diagnostic Coding and Reporting Guidelines for Outpatient Services

Though the conventions and general guidelines apply to all settings, coding guidelines for outpatient and provider reporting of diagnoses will vary in a number of instances from those for inpatient diagnoses, recognizing that:

> The Uniform Hospital Discharge Data Set (UHDDS) definition of principal diagnosis applies only to inpatients in acute, short-term, long-term care and psychiatric hospitals. Coding guidelines for inconclusive diagnoses (probable, suspected, rule out, etc.) were developed for inpatient reporting and do not apply to outpatients.

E. Codes that describe symptoms and signs

Codes that describe symptoms and signs, as opposed to diagnoses, are acceptable for reporting purposes when a diagnosis has not been established (confirmed) by the provider. Chapter 16 of ICD-9-CM, Symptoms, Signs, and Ill-defined conditions (codes 780.0 - 799.9) contain many, but not all codes for symptoms.

H. ICD-9-CM code for the diagnosis, condition, problem, or other reason for encounter/visit

List first the ICD-9-CM code for the diagnosis, condition, problem, or other reason for encounter/visit shown in the medical record to be chiefly responsible for the services provided. List additional codes that describe any coexisting conditions. In some cases the first-listed diagnosis may be a symptom when a diagnosis has not been established (confirmed) by the physician.

I. Uncertain diagnosis

Do not code diagnoses documented as "probable", "suspected," "questionable," "rule out," or "working diagnosis" or other similar terms indicating uncertainty. Rather, code the condition(s) to the highest degree of certainty for that encounter/visit, such as symptoms, signs, abnormal test results, or other reason for the visit.

Please note: This differs from the coding practices used by short-term, acute care, long-term care and psychiatric hospitals.

J. Chronic diseases

Chronic diseases treated on an ongoing basis may be coded and reported as many times as the patient receives treatment and care for the condition(s)

K. Code all documented conditions that coexist

Code all documented conditions that coexist at the time of the encounter/visit, and require or affect patient care treatment or management. Do not code conditions that were previously treated and no longer exist. However, history codes (V10-V19) may be used as secondary codes if the historical condition or family history has an impact on current care or influences treatment.

L. Patients receiving diagnostic services only

For patients receiving diagnostic services only during an encounter/visit, sequence first the diagnosis, condition, problem, or other reason for encounter/visit shown in the medical record to be chiefly responsible for the outpatient services provided during the encounter/visit. Codes for other diagnoses (e.g., chronic conditions) may be sequenced as additional diagnoses.

For encounters for routine laboratory/radiology testing in the absence of any signs, symptoms, or associated diagnosis, assign V72.5 and/or a code from subcategory V72.6. If routine testing is performed during the same encounter as a test to evaluate a sign, symptom, or diagnosis, it is appropriate to assign both the V code and the code describing the reason for the non-routine test.

For outpatient encounters for diagnostic tests that have been interpreted by a physician, and the final report is available at the time of coding, code any confirmed or definitive diagnosis(es) documented in the interpretation. Do not code related signs and symptoms as additional diagnoses.

Please note: This differs from the coding practice in the hospital inpatient setting regarding abnormal findings on test results.

VIII. Changing Provider Behavior

Chapter 54. Educational Techniques Used in Changing Provider Behavior

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Background

A number of techniques have been used to modify the behavior of practicing physicians.[1] Continuing medical education, practice guidelines and critical pathways represent a major thrust of these efforts. The relative effectiveness of each is largely dependent on the particular strategy employed in their implementation.[2] Traditionally these strategies have focused on lectures and printed materials but other techniques have also been utilized, including audit and feedback, academic detailing, local opinion leaders and reminder systems. In addition, some have championed the use of sentinel event reporting and root cause analysis in graduate medical education programs.[3] Only recently have these various techniques been critically evaluated for their effectiveness at changing physician behavior.

This chapter reviews the evidence regarding the utility of educational-oriented techniques to improve provider behavior, particularly as they do or might pertain to patient safety practices. Incident reporting (Chapter 4), root cause analysis (Chapter 5), guidelines (Chapter 51), pathways (Chapter 52), and decision support systems (Chapter 53) are reviewed elsewhere in the Compendium.

Practice Description

The passive dissemination of information through the use of lectures, conferences, mailings and printed materials remains the primary method to alter physician behavior. This primacy has not been substantially challenged in practice, although more interactive techniques have increasingly been utilized. *Academic detailing*, for example, involves the process of having invested and well-informed agents for change interacting with individual physicians to promote certain tenets of practice. Alternatively, *audit and feedback* entails the review and return to the clinician of their own process of care and patient outcomes (often compared with local or national benchmarks or evidence-based standards) in the hopes it will result in more appropriate medical care.[3] *Reminder systems*, which may be computerized and embedded in the electronic medical record, prompt physicians to provide certain healthcare measures. They differ from *clinical decision support systems* (Chapter 53) in that they may not provide information tailored to the specific patient. Finally,*opinion leaders*, usually respected local physicians, may improve healthcare by championing "best practices" on a regional basis.[4, 5]

Prevalence and Severity of Target Safety Problem/Opportunities for Impact

It is well established that physicians are unable to keep abreast of the staggering volume of published medical literature. This is reflected by the many studies that demonstrate the glacial pace at which many beneficial advances are incorporated into medical practice. Practice guidelines, clinical decision support systems and programs for physician education are potential solutions to this problem, but their effectiveness is greatly dependent on the methods used in their implementation.[2] Despite the presence of comprehensive guidelines on the treatment of reactive airways disease, for example, a substantial percentage of asthmatic patients do not receive appropriate care.[6, 7] Physician education techniques that reliably impact practice patterns may yield substantial improvements in patient care and safety.

Study Designs

The Cochrane Group completed a series of systematic reviews of physician education based on the Research and Development Base in Continuing Medical Education, a central database compiled from an extensive search of electronic databases and bibliographies and supplemented by contact with experts in the field. Although the initial review was completed in 1997, reviews are regularly updated as more pertinent data are published. One such study evaluated the role of audit and feedback and found 37 randomized controlled studies comparing this technique to non-interventional control groups.[3] An ancillary study by the Cochrane Group compared audit and feedback with other educational strategies and located 12 randomized controlled studies for analysis.[10] A second study of the effectiveness of audit and feedback was completed by a separate group that searched MEDLINE and selected bibliographies for trials investigating the strategy's utility in improving immunization rates. Fifteen studies were identified for inclusion, 5 of which were randomized controlled studies with 6 interrupted time series evaluations and 4 before-after trials.[11] A third meta-analysis of peer-comparison feedback systems used an extensive electronic database and bibliography search to locate 12 randomized controlled studies.[12]

The Cochrane Group also investigated the utility of academic detailing and found 18 randomized controlled studies.[13] A similar evaluation of local opinion leaders yielded 8 randomized controlled trials.[5]

A separate Cochrane review was completed on the utility of printed educational materials using the Cochrane Effective Practice and Organization of Care Group database. The search of this database, which was compiled in the same manner as the Research and Development Base in Continuing Medical Education, found 10 randomized controlled trials and one interrupted time series study fulfilling criteria for analysis.[14]

Study Outcomes

Few of the studies report outcomes specific to the field of patient safety. The vast majority are concerned with process of care rather than the outcomes of care. Although clinical outcomes are reported in at least one of the studies evaluated in each of the systematic reviews (with one exception), the majority relate outcomes pertaining to physician performance. Some of the more commonly described variables include the rates of appropriate provision of preventive care measures and of adherence to appropriate treatment or diagnostic protocols.

Evidence for Effectiveness of Practice

Much of the evidence for the effectiveness of educational and implementation techniques is of fair quality and the results are generally consistent across the various systematic reviews. However, methodologic concerns prevented the completion of quantitative data synthesis in the majority of the reviews. The studies are summarized in Table 54.1.

The initial comprehensive review found overall beneficial effect for 62% of interventions. In investigations of effect on patient outcomes, 48% had favorable results. Academic detailing and the use of local opinion leaders were the most effective techniques evaluated. Physician reminder systems were also effective, as 22 of the 26 evaluated studies revealed some benefit. The technique of audit and feedback was of marginal effectiveness and conferences and printed materials were found to be relatively ineffective. Of note, multifaceted interventions with at least 3 components were associated with a 71% success rate.[8] The second comprehensive review of 102 randomized controlled studies supported these conclusions. Yet it emphasized that the degree of effect with even the most consistently effective techniques was moderate at best, and that the process of care rather than the outcome of care was the most readily influenced variable.[9]

The Cochrane reviews reported similar results. Audit and feedback was found to be effective in 62% of the studies in which it was compared with non-interventional controls, but the effect was typically small. The results were not substantially different when audit and feedback was augmented by conferences or educational materials or was part of a multifaceted intervention.[3] In the review of comparative trials, however, this technique was found to be inferior to reminder systems in 2 of the 3 trials where a direct comparison was made.[10] The second review of audit and feedback, which focused on improving immunization rates, found beneficial results in 4 of 5 randomized controlled trials evaluated. Statistically significant changes were present in at least 2 of these evaluations. However, the marginal effect was small and likely was overwhelmed by the relatively high cost of the intervention.[11] Finally the meta-analysis of the 12 randomized controlled trials investigating peer-comparison feedback systems did establish a modest benefit for the use of audit and feedback ($p<0.05$), but the magnitude of benefit was again noted to be small.[12]

The Cochrane review of academic detailing was somewhat more optimistic. All of the evaluated studies showed some degree of a beneficial effect on physician performance although only one of these studies reported patient outcomes. Most combined detailing with other techniques and there was insufficient evidence to make direct comparisons between detailing and the other techniques.[13]

The use of local opinion leaders was also found to be effective by the Cochrane group, although to a much less convincing degree than academic detailing. Two of 7 trials showed a statistically significant beneficial effect with a trend toward effectiveness in all 7 studies. One of 3 trials investigating patient outcomes demonstrated a significant benefit.[5]

Finally, the Cochrane review of the use of printed educational materials supported the findings of the previous overviews. None of the 9 studies showed a statistically significant effect when compared with controls and only one of 6 trials that included printed materials in a multifaceted approach demonstrated benefit. Of note, all of the evaluated trials were plagued by methodologic shortcomings.[14]

Potential for Harm

These educational techniques are unlikely to cause significant patient harm.

Costs and Implementation

Although the cost-effectiveness of the various educational techniques has not been explicitly studied, it is clear that several may require substantial outlay in terms of financial resources and personnel. It also appears that the forms of education that are most effective, including academic detailing and local opinion leaders, are also the most expensive to design and support. Programs of printed materials and lectures, although dramatically less effective, are substantially less expensive to implement. It is unclear whether the integration of Internet technology and computer-based education initiatives will result in substantial changes in efficacy or cost. Finally, the relative cost-effectiveness of the various techniques remains unclear.

Comment

From studies of randomized controlled trials, it appears that academic detailing and local opinion leaders are frequently associated with at least some benefit. Reminder systems are also effective in specific situations and the utility of audit and feedback has been established, although unimpressively. Traditional programs of conferences, lectures and printed materials are ineffective at inducing changes in physician behavior. None of the current techniques, however, have demonstrated a consistent ability to induce substantial and durable changes in physician behavior. The relative cost-effectiveness of the various techniques is uncertain; it remains unclear if the added cost of the more effective strategies (i.e., academic detailing and local opinion leaders) is justified given their relatively small marginal increase in effectiveness. Finally there are few data regarding the specific utility of these techniques in increasing patient safety and/or the prevention of medical errors. However, techniques effective in other areas of medicine are likely to be equally effective in inducing practices changes to improve patient safety.

Table 54.1. Studies of techniques for changing physician behavior*

Study Setting	Study Design	Results
Review of 99 trials assessing the effect of educational techniques on physician performance in all clinical settings[8]	Level 1A	62% of the interventions were associated with beneficial results; academic detailing, local opinion leaders and reminder systems were the most effective while audit and feedback was less so; traditional CME programs were ineffective
Review of 102 trials assessing the effect of educational techniques on physician performance in all clinical settings[9]	Level 1A	Academic detailing and local opinion leaders were the most effective techniques; audit and feedback and reminder systems were less effective; multifaceted approaches were effective, especially at influencing the process of care
Review of 37 randomized controlled trials of the utility of audit and feedback in all clinical settings in the US, Europe and Australia[3]	Level 1A	Eight of 13 studies showed a moderate beneficial effect with audit and feedback with little change noted when other interventions were added or a multifaceted approach was used
Review of 12 trials comparing the effect of audit and feedback with other educational techniques on 2194 physicians in all clinical settings[10]	Level 1A	Two of 3 trials showed reminder systems outperformed audit and feedback; 4 studies demonstrated little benefit to adding other modalities to audit and feedback
Review of fifteen studies, of which five were randomized controlled trials, investigating the use of audit and feedback in improving immunization rates in adults and children in the outpatient setting in the US and the UK[11]	Level 1A	Twelve of the 15 studies showed a benefit with audit and feedback and of the 5 RCTs, 4 showed a beneficial trend that was significant in at least 2 of the trials
Review of 18 trials investigating the effects of academic detailing on 1896 physicians in the US, Canada, Europe, Indonesia and Australia[13]	Level 1A	All of the evaluated studies showed some degree of benefit although only one looked specifically at patient outcomes
Review of 8 randomized controlled trials investigating the effect of local opinion leaders on 296 physicians in the US, Canada and Hong Kong[5]	Level 1A	Six of the 7 studies evaluating effects on physician performance showed a beneficial effect with 2 of these being statistically significant; one of the 3 trials evaluating patient outcomes showed a significantly positive effect
Review of eleven studies evaluating the effect of printed education materials on over 1848 physicians in a variety of clinical settings[14]	Level 1A	None of the studies reported significantly improved outcomes with the use of printed educational materials

* CME indicates continuing medical education; RCT, randomized controlled trial.

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IX. Coding Symptoms – From AHIMA

How to Code Symptoms and Definitive Diagnoses

by Sue Prophet, RHIA, CCS

Determining when a symptom, definitive diagnosis, or both should be coded can be challenging for coding professionals. This challenge is complicated by the varying rules regarding the coding of symptoms versus definitive diagnoses, according to the type of encounter and the particular service rendered. In an era of increased focus on fraud/abuse and regulatory compliance, it is especially important for coding professionals to understand and properly apply official coding rules and guidelines. This article will explore the various guidelines affecting symptom and definitive diagnosis coding and what guidelines to apply.

Conditions Integral to Disease Process

Conditions that are integral to a disease process should not be assigned as additional codes. This guideline applies to all healthcare settings. For example, nausea and vomiting should not be coded in addition to gastroenteritis, because these symptoms would be considered integral to a diagnosis of gastroenteritis. Similarly, wheezing should not be coded in addition to a diagnosis of asthma. Conditions that are considered integral to a disease process are not always included in Chapter 16 of ICD-9-CM. For example, pain or stiffness in a joint, which are found in the Musculoskeletal chapter of ICD-9-CM, would be considered integral to a diagnosis of arthritis. Conversely, conditions that may not be associated routinely with a disease process should be assigned additional codes. A solid understanding of the disease process is necessary, and it may sometimes be necessary to confer with the physician.

"Probable," "Suspected," and "Rule Out" Diagnoses

In the inpatient setting, if a diagnosis documented at the time of discharge is qualified as "probable," "suspected," "likely," "questionable," "possible," or "rule out," the condition should be coded as if it existed or was established. The basis for this guideline are the diagnostic workup, arrangements for further workup or observation, and initial therapeutic approach that correspond most closely with the established diagnosis.

In the outpatient setting (including physician offices), diagnoses documented as "probable," "suspected," "questionable," or "rule out" should not be coded as if they are established. Rather, the conditions should be coded to the highest degree of certainty for that encounter, such as symptoms, signs, abnormal test results, or other reason for the visit. For example, if the physician documents "fever and cough, possible pneumonia" at the conclusion of an emergency room visit, only the fever and cough should be coded, because those symptoms represent the highest degree of certainty for that encounter. However, if the physician documents "fever and cough, possible pneumonia" on a requisition for an outpatient chest x-ray, and the radiologist's diagnosis on the radiology report is "pneumonia," it is appropriate to code the pneumonia, as this diagnosis represents the highest degree of certainty for the encounter for the x-ray. Based on *Coding Clinic for ICD-9-CM* 17, no. 1, it is appropriate to code based on the physician documentation available at the time of code assignment.

Symptoms Followed by Contrasting/Comparative Diagnoses

When selecting the principal diagnosis in the inpatient setting, if a symptom is followed by contrasting/comparative diagnoses, the symptom code should be sequenced first and all of the contrasting/comparative diagnoses should be coded as suspected conditions per the guideline mentioned above concerning the coding of "suspected" inpatient diagnoses. For contrasting/comparative diagnoses involving secondary diagnoses in the inpatient setting, only the symptom should be coded. The contrasting/comparative diagnoses should not be coded. However, when a symptom is followed by contrasting/comparative diagnoses in an outpatient setting, only the symptom should be coded.

Symptom Versus Malignancy as Principal Diagnosis

Symptoms, signs, and ill-defined conditions listed in Chapter 16 of ICD-9-CM that are characteristic of, or associated with, an existing primary or secondary-site malignancy can not be used to replace the malignancy as principal diagnosis, regardless of the number of admissions or encounters for treatment and care of the neoplasm.

Specific Outpatient Coding Guidelines

These guidelines should be applied for facility-based outpatient services and physician offices. As stated in the *Diagnostic Coding and Reporting Guidelines for Outpatient Services*, codes that describe symptoms and signs, as opposed to diagnoses, are acceptable for reporting purposes when an established diagnosis has not been confirmed by the physician. However, this means that when a definitive diagnosis has been established for that encounter, the established diagnosis should be coded. In this case, those signs or symptoms that are integral to the established diagnosis should not be coded. Any conditions, including signs and symptoms, that are not routinely associated with the definitive diagnosis should be assigned as additional codes.

Encounters for Diagnostic Services

For patients receiving diagnostic services only during an outpatient encounter, sequence first the diagnosis, condition, problem, or other reason for the encounter shown in the medical record to be chiefly responsible for the outpatient services provided during the encounter/visit. This guideline must be used in conjunction with all other applicable coding rules and guidelines. For example, it could be argued that the symptoms of "pain and swelling in wrist" documented on the requisition for an outpatient x-ray of the wrists are the conditions "chiefly responsible" for the outpatient service rendered. However, the guidelines regarding the assignment of codes for the "highest degree of certainty" and "conditions integral to the disease process" also need to be taken into consideration. If the radiologist's interpretation on the radiology report establishes a diagnosis of fractured wrist, then the fracture is the condition representing the highest degree of certainty for this encounter. The pain and swelling would not be coded, even as secondary diagnoses, because they are an integral part of the fracture diagnosis.

Encounters for Ancillary Tests

Coding Clinic for ICD-9-CM 17, no. 1, clarifies that it is appropriate for coding professionals to use physician interpretations of tests as a basis for accurate code assignments in the outpatient setting. For example, if the surgeon removes a lesion and the pathologist's diagnosis on the

pathology report is carcinoma, the carcinoma should be coded, as it is the more definitive diagnosis.

This advice is consistent with the official outpatient coding guidelines, including the guideline regarding the assignment of codes to the highest degree of certainty for that encounter. The diagnosis documented by the pathologist or radiologist is the condition representing the highest degree of certainty for that visit. When the physician interpretation of a test performed in the outpatient setting establishes a definitive diagnosis, this definitive diagnosis should be coded and any presenting symptoms that are integral to this diagnosis should not be coded. Any documented symptoms or conditions that are not routinely associated with the definitive diagnosis should be assigned additional codes. It is not necessary to code incidental findings documented in physician interpretations of tests.

Abnormal findings in test results that are not interpreted by a physician, such as clinical laboratory tests like CBC or urinalysis, should not be coded unless confirmation of a definitive diagnosis is obtained from the patient's physician. In these cases, the presenting symptoms, conditions, or other reasons for the test should be coded.

Reason for Visit

Some payers have encouraged, or insisted, that hospitals report the presenting symptoms for emergency room visit, even when a definitive diagnosis is established and reporting the symptoms would violate the official coding guideline concerning the reporting of symptoms integral to the definitive diagnosis. The payers are requesting this information in order to establish the emergent nature of the patient's complaint. The presenting symptoms (such as chest pain) may justify an emergency room visit, but the definitive diagnosis (such as hiatal hernia) is a non-urgent condition and would not, by itself, justify a trip to the emergency room.

To solve this dilemma while maintaining data integrity and adhering to official coding guidelines, the National Uniform Billing Committee agreed to expand the title and definition of the admitting diagnosis field on the UB-92 claim form to accommodate the need for information regarding the presenting sign or symptom. The title of this data element has been expanded to include "patient's reason for visit." The definition has been modified to read: "the ICD-9-CM diagnosis code describing the patient's diagnosis or reason for visit at the time of admission or outpatient registration." For outpatient claims, this should be the ICD-9-CM code describing the patient's stated reason for seeking care (or as stated by the patient's representative, such as parent, legal guardian, or paramedic). The modification of the description and definition of the Admitting Diagnosis field met several objectives, including:

- facilitating claims processing by allowing providers to report the reason the patient presented for treatment
- the new outpatient definition is consistent with the intent of the prudent layperson legislation that seeks to establish the reason the patient is seeking care (which may differ from the diagnosis established by the physician at the conclusion of the visit)
- the outpatient definition is consistent with various national definitions for the patient's reason for visit
- providing explanation as to why certain tests may have been ordered and performed
- reducing administrative burden on providers and payers by eliminating requests for additional documentation in some cases

- promoting adherence to established national coding guidelines

An ICD-9-CM diagnosis code should be reported in the admitting diagnosis field on the UB-92 whenever there is an unscheduled outpatient visit to a healthcare facility's emergency room or urgent care center. Currently, the UB-92 claim form can only accommodate one diagnosis code to describe the patient's primary reason for seeking care or treatment. The diagnosis code describing the patient's reason for the unscheduled visit should only be reported on outpatient claims. If the unscheduled visit results in an inpatient admission, the admitting diagnosis code should be reported instead of the reason for the outpatient visit. The use of the admitting diagnosis field for outpatient emergent and urgent encounters became effective April 1, 2000, and applies to all payers.

Note: Information in *Coding Clinic for ICD-9-CM* 17, no. 1, regarding the use of physician interpretations of tests in correct code assignment applies only to outpatient encounters. Please refer to the first quarter 2000 issue of *Coding Clinic for ICD-9-CM* for complete information on coding outpatient laboratory, pathology, and radiology encounters, including specific examples.

References

American Hospital Association. *Coding Clinic for ICD-9-CM* 15, no. 1. Chicago, IL: American Hospital Association, 1998.

American Hospital Association. *Coding Clinic for ICD-9-CM* 16, no. 4. Chicago, IL: American Hospital Association, 1999.

American Hospital Association. *Coding Clinic for ICD-9-CM* 17, no. 1. Chicago, IL: American Hospital Association, 2000.

Official ICD-9-CM Guidelines for Coding and Reporting. Available at the National Center for Health Statistics Web site, www.cdc.gov/nchs/datawh/ftpserv/ftpicd9/ftpicd9.htm.

Source:

http://library.ahima.org/xpedio/groups/public/documents/ahima/bok2_000466.hcsp?dDocName=bok2_000466

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X. Alcohol Abuse vs. Dependence Discussion

The Difference Between Alcohol Abuse and Alcohol Dependence

Posted by: Addiction Treatment
Posted date: February 08, 2010
In: Alcohol Addiction

In non-clinical settings, use of the terms alcohol abuse and alcohol dependence commonly refer, rather generically, to the problematic use of alcohol. While these terms are often used interchangeably, there are significant differences between them. Each is a specific diagnosis that describes a type of problematic drinking. A third term, alcoholism, is also widely used in reference to severe drinking, but it is not a formal clinical term or diagnosis. The word alcoholism is commonly used within the 12 Step community of Alcoholics Anonymous and is considered a layman's term.

Both alcohol abuse and alcohol dependence are distinct types of mental health diagnoses more specifically known as alcohol use disorders. The diagnoses are given if specific and negative consequences of alcohol use have occurred for the drinker. When the criteria in each diagnosis are compared, their differences are notable; each indicates a very distinct disorder.

A simplified difference between alcohol abuse and alcohol dependence is that abuse describes the early stages of alcohol dependence. Dependence is a more complex and chronic condition. Therefore, while both indicate the consequences of problematic drinking, abuse has fewer symptoms. Essentially, alcohol abuse lays the groundwork for alcohol dependence in the life of the drinker and diagnostically.

Abuse occurs when there is a pattern of one or more alcohol-related negative consequences such as:

- recurring role failure related to the use of alcohol — failing to fulfill obligations and responsibilities associated with one's role within work, school or home because of drinking
- recurring use of alcohol in situations that could be physically dangerous — for example, driving or operating machinery while using alcohol
- recurring legal problems that are alcohol-related — public intoxication, driving while under the influence or disorderly conduct, for example

A person is said to abuse alcohol when the drinking, and the recurring negative consequences of drinking, have occurred within the same 12 month period. Additionally, in order for an individual to be diagnosed as having alcohol abuse, he or she must continue to drink despite having had such alcohol-related problems.

On the other hand, the diagnostic requirements for alcohol dependence are far more comprehensive. Alcohol dependence is generally considered to be an alcohol-related illness with physiological symptoms. Unlike alcohol abuse, the diagnosis of dependence addresses

symptoms of alcohol tolerance and alcohol withdrawal. The diagnostic criteria of alcohol dependence include:

- evidence of a change in tolerance for alcohol—drinking may increase to achieve intoxication, for example
- withdrawal symptoms—hangovers, tremors, shakes, etc
- the desire to stop or decrease use
- unsuccessful efforts to stop or decrease use
- preoccupation with alcohol use
- negative consequences of drinking
- continued drinking despite negative consequences or the desire to stop

Diagnostically, alcohol dependence overrides the diagnosis of alcohol abuse. That is, one cannot clinically be considered to have alcohol dependence and alcohol abuse at the same time. This is because alcohol abuse is a necessary precursor to alcohol dependence–one must establish a pattern of harmful drinking before becoming dependent upon alcohol. Additionally, once the progression from alcohol abuse to alcohol dependence occurs, an individual is considered to have alcohol dependence whether drinking or not.

The illness of alcohol dependence can be in various stages of activity or remission and consequently, the diagnosis of alcohol dependence is typically used whether an individual continues to drink or not. Of the two alcohol use disorders — abuse and dependence — only alcohol dependence specifies how active the disorder is. For example, the diagnosis of alcohol dependence can be expanded to include the following throughout the lifetime of a person who has this illness:

- alcohol dependence in early full remission — no symptoms of dependence or abuse have occurred for at least one month, but less than one year
- alcohol dependence and early partial remission — some symptoms of dependence or abuse have been present for at least one month or less than a year
- alcohol dependence in sustained full remission — no symptoms of abuse or dependence appear at any time during one year or longer
- alcohol dependence and sustained partial remission — some symptoms of abuse or dependence are present for one year or longer

Additionally, the diagnosis of alcohol dependence can be given as the following:

- alcohol dependence with physiological dependence
- alcohol dependence without physiological dependence
- alcohol dependence in a controlled environment

The use of these last three terms further clarifies how the illness of dependence is experienced at any given time. For example, an individual may drink to the point of becoming physiologically dependent upon a particular amount of alcohol to prevent withdrawal. The effects of withdrawal in such a case can range from mild discomfort to medical distress.

On the other hand, a person may be alcohol dependent without requiring a certain amount of alcohol to prevent withdrawal. In order to qualify for the diagnosis of alcohol dependence, physiological dependency is not required.

Alcohol dependence in a controlled environment indicates that a person may have been unable to drink because alcohol was not available. This term is frequently used when an individual has been hospitalized or incarcerated. This is an example of how the illness of alcohol dependence is considered to be present even when an individual is not drinking.

Notably, the diagnosis of alcohol abuse does not include any references to physiological dependence or remission. These are exclusive to the diagnosis of alcohol dependence. They clearly indicate that dependence is considered an illness and that it is far more complex than abuse.

In summary, alcohol abuse and alcohol dependence are closely related in the lives of people with problematic drinking. Alcohol abuse is the clinical warning sign that the illness of alcohol dependence could develop. It is a significant and necessary part of the larger picture of dependence.

Treatment for both alcohol abuse and alcohol dependence involves abstinence. Once an episode of alcohol abuse is treated successfully, however, the term is no longer used as a current diagnosis. At times, the term alcohol abuse by history will be used to indicate that an individual has had previous problems with alcohol and may be susceptible to these in the future. Once an incident of alcohol abuse is over, however, one is not still considered to have an alcohol use disorder.

Alcohol dependence is significantly different. Successful treatment of dependence does not eliminate the diagnosis. Even in abstinence from alcohol use, an individual is still considered to have the illness of alcohol dependence. The illness is considered, in sobriety, to be in a type of remission.

http://www.addictiontreatmentmagazine.com/addiction/alcohol-addiction/the-difference-between-alcohol-abuse-and-alcohol-dependence/

XI. Cachexia

Cachexia as a major underestimated and unmet medical need: facts and numbers

Stephan von Haehling and Stefan D. Anker
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3060651/

Cachexia is a serious, however underestimated and underrecognised medical consequence of malignant cancer, chronic heart failure (CHF), chronic kidney disease (CKD), chronic obstructive pulmonary disease (COPD), cystic fibrosis, rheumatoid arthritis, Alzheimer's disease, infectious diseases, and many other chronic illnesses. The prevalence of cachexia is high, ranging from 5% to 15% in CHF or COPD to 60% to 80% in advanced cancer. By population prevalence, the most frequent cachexia subtypes are in order: COPD cachexia, cardiac cachexia (in CHF), cancer cachexia, and CKD cachexia. In industrialized countries (North America, Europe, Japan), the overall prevalence of cachexia (due to any disease) is growing and currently about 1%, i.e., about nine million patients. The relative prevalence of cachexia is somewhat less in Asia, but is a growing problem there as well. In absolute terms, cachexia is, in Asia (due to the larger population), as least as big a problem as in the Western world. Cachexia is also a big medical problem in South America and Africa, but data are scarce. A consensus statement recently proposed to diagnose cachexia in chronic diseases when there is weight loss exceeding 5% within the previous 3–12 months combined with symptoms characteristic for cachexia (e.g., fatigue), loss of skeletal muscle and biochemical abnormalities (e.g., anemia or inflammation). Treatment approaches using anabolics, anti-catabolic therapies, appetite stimulants, and nutritional interventions are under development. A more thorough understanding of the pathophysiology of cachexia development and progression is needed that likely will lead to combination therapies being developed. These efforts are greatly needed as presence of cachexia is always associated with high-mortality and poor-symptom status and dismal quality of life. It is thought that in cancer, more than 30% of patients die due to cachexia and more than 50% of patients with cancer die with cachexia being present. In other chronic illnesses, one can estimate that up to 30% of patients die with some degree of cachexia being present. Mortality rates of patients with cachexia range from 10% to 15% per year (COPD), to 20% to 30% per year (CHF, CKD) to 80% in cancer.

XII. Source References and Others of Interest

ICD-9-CM Official Guidelines for Coding and Reporting
Effective October 1, 2010

http://www.cdc.gov/nchs/data/icd9/icdguide10.pdf

This is the full text of the Official Coding Guidelines that dictate use of the ICD 9. Please note that there are variances between the Inpatient and Outpatient coding rules in a number of cases pertinent to GHC policy discussions.

MD Guidelines – Depression, Major

http://www.mdguidelines.com/depression-major

This is an overview and discussion regarding various forms of depression. It is important to refer to the DSM IV (Diagnostic and Statistical Manual of Mental Disorders) for specific components of depression or other mental disorders to ensure that the diseases are recognized clearly and coded correctly.

CDC Promotes Public Health Approach to Address Depression among Older Adults

http://www.cdc.gov/aging/pdf/CIB_mental_health.pdf

This is a discussion from the CDC around the cost and treatment of depression in the elderly.

Treating Depression in Patients with Chronic Disease – Gregory E. Simon

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1071593/

This is a pubmed reprint form the Western Journal of Medicine (November 2001) written by an associate of the Center for Health Studies at GHC.

AHIMA (American Health Information Management Association)
Problem List Guidance in the EHR

http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_049241.hcsp?dDocName=bok1_049241

This is a discussion document relating to problem lists, their purpose and function and suggestions relating to management in an EMR or HER

2007 Risk Adjustment Data Basic Training For Medicare Advantage Organizations

http://www.mcoservice.com/internet/Cssc.nsf/files/ra-resourceguide_120607.pdf/$FIle/ra-resourceguide_120607.pdf

This CMS Resource Guide is intended to help Medicare Advantage (MA) organizations, providers, physicians, and third party submitters locate information specific to risk adjustment.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Medicare & Medicaid Services
Oxygen Therapy Supplies: Complying with Documentation & Coverage Requirements

https://www.cms.gov/MLNProducts/downloads/OxgnThrpy_DocCvg_FactSheet_ICN904883.pdf

This is a CMS document outlining documentation and clinical requirements for provision of oxygen

2011 USRDS Annual Data Report -Chapter Six Costs of Chronic Kidney Disease
Cost of CKD

http://www.usrds.org/2011/view/v1_06.asp

U.S. Renal Data System, USRDS 2011 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2011.

Department of Health and Human Services Centers for Medicare and Medicaid Services - Evaluation and Management Services Guide

https://www.cms.gov/MLNProducts/downloads/eval_mgmt_serv_guide-ICN006764.pdf

This publication describes the requirements for appropriate medical record documentation from CMS

Medicare Claims Processing Manual
Chapter 23 - Fee Schedule Administration and Coding Requirements

https://www.cms.gov/manuals/downloads/clm104c23.pdf

The first section of this chapter describes Medicare expectations of ICD 9 coding

Chapter 54. Educational Techniques Used in Changing Provider Behavior

http://www.ahrq.gov/clinic/ptsafety/chap54.htm

This document gives an overview of the expected outcomes in changing provider behavior